REMARKS

Applicant has amended the abstract. Applicant respectfully submits that the amendments to the abstract are supported by the application as originally filed and do not contain any new matter.

The Examiner has objected to the abstract as being too long. Applicant has amended the abstract to comply with the proper content of the abstract of the disclosure as pointed out by the Examiner and respectfully requests that the Examiner withdraw his objection.

The Examiner has rejected claims 1 and 3 under 35 USC 103 as being obvious over Kahn in view of Morgan et al., stating that Kahn discloses a pan/tilt camera system which includes a sensor spaced from the rotational shaft of the pan/tilt camera as met by optical limit switch 42, vanes 43 and 44 which correspond to the directed piece and the origin setting unit and the pulse counter is met by the microcontroller 53 and firmware 54 and directs Applicant's attention to col. 5, line 31 through col. 7, line 37, but fails to disclose a backlash calculating unit; Morgan et al. teaches that it is known to correct for backlash in a pulse driven element by having a different number of pulses for forwards direction driving and backwards direction driving; and it would have been obvious to one of ordinary skill in the art to modify the device of Kahn in view of the teachings of Morgan et al.

Applicant has carefully reviewed Kahn and respectfully submits that while Kahn may disclose a pan/tilt tracking mount, the precision in the operation of Kahn is based upon either precision optical limit switches used in an open loop control circuit or optical encoders used in a closed loop motor control system, but not both together (see col. 4, lines 20-22, lines 35-37 and 40-42). Accordingly, Applicant respectfully submits that since Kahn relies upon its precision positioning based upon either the precision limit switches or the encoders, there is no suggestion, teaching or motivation to one of ordinary skill in the art to compensate for backlash in the mechanical drive. Therefore, Applicant respectfully submits that one of ordinary skill in the art would not be suggested to add a backlash compensating system into Kahn by the teachings of Kahn.

Applicant has further reviewed Morgan et al. and respectfully submits that Morgan et al. discloses a print head alignment system and there is no suggestion in Morgan et al. that one would utilize the print head alignment system in a pan/tilt tracking mount as in Kahn. Also, Applicant's further careful review of Morgan et al. indicates that in fact Morgan et al. does not

disclose the calculation of backlash. Instead, Morgan et al. discloses "in order to correct for backlash in the mechanical part of the print head transport mechanism or hysteresis in the electronic control system, the counter may be decremented to a count which is offset by a predetermined amount from the initial count" (see col. 5, lines 57-61). Accordingly, Applicant respectfully submits that Morgan et al. merely suggests the backlash or hysteresis may be corrected by entering an offset amount which is predetermined and is not calculated in Morgan et al. from the signals derived in Morgan et al.

In view of the above, therefore, Applicant respectfully submits that not only is the combination suggested by the Examiner not Applicant's invention but also the combination suggested by the Examiner is not suggested by the art. Therefore, Applicant respectfully submits that claims 1-3 are not obvious over Kahn in view of Morgan et al.

The Examiner has further rejected claims 2 and 4 under 35 USC 103 as being obvious over Kahn in view of Morgan et al. and further in view of Ellenberger et al., stating that while the drive mechanism of Kahn includes a "worm gear" and "transmitting a drive force developed by the stepping motor", Kahn does not disclose the claimed "two synchronous pulleys fitted on an outer shaft and a worm shaft of the stepping motor respectively and a synchronous toothed belt extending between the synchronous pulleys"; Ellenberger et al. teaches connecting the drive output of a motor to a worm in a camera mount; and it would have been obvious to one of ordinary skill in the art to modify the combination of Kahn and Morgan et al. in view of the teachings of Ellenberger et al.

In reply thereto, Applicant would like to incorporate by reference his comments above concerning Applicant's invention, Kahn and Morgan et al. Still further, Applicant has carefully reviewed Ellenberger et al. and respectfully submits that while Ellenberger et al. may teach connecting the drive output of a motor to a worm in a camera mount, Ellenberger et al. does not show or disclose the utilization of synchronous pulleys or synchronous toothed belt extending between the synchronous pulleys and merely discloses in Fig. 8 and at col. 8 a drive chain 305 entrained in and extended about the drive sprocket 304 of the drive motor 302 and the sprocket 287 of the worm gear 285.

In view of the above, therefore, Applicant respectfully submits that the combination suggested by the Examiner is not only not Applicant's invention but also would not be suggested

to one of ordinary skill in the art. Therefore, Applicant respectfully submits that claims 2 and 4 are not obvious over Kahn in view of Morgan et al. and further in view of Ellenberger et al.

In view of the above, therefore, it is respectfully requested that this Amendment be entered, favorably considered and the case passed to issue.

Please charge any additional costs incurred by or in order to implement this Amendment or required by any requests for extensions of time to KODA & ANDROLIA DEPOSIT ACCOUNT NO. 11-1445.

Respectfully submitted,

KODA & ANDROLIA

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